10/24/2003 11:53

Amendments to the claims:

- (original) A vertical cavity surface emitting laser, comprising: 1. an optical cavity adjacent a first mirror; an emitting mirror adjacent said optical cavity; a mode defining aperture for controlling transverse modes; and an absorbing layer integrated within the emitting mirror, wherein said absorbing layer is laterally located within at least a portion of said mode defining aperture.
- 2. (original) The vertical cavity surface emitting laser of claim 1 wherein said absorbing layer comprises a layer of conductive material.
- 3. (original) The vertical cavity surface emitting laser of claim 2 wherein said conductive material comprises titanium.
- (original) The vertical cavity surface emitting laser of claim 1 wherein said absorbing 4. layer comprises a layer of semiconductor material.
- 5. (original) The vertical cavity surface emitting laser of claim 4 wherein said semiconductor material is doped p-type.
- 6. (original) The vertical cavity surface emitting laser of claim 4 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said semiconductor material is at a longer wavelength than emission wavelength of said vertical cavity surface emitting laser.
- 7. (original) The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a DBR having a plurality of mirror periods.



Serial No. 10/051,510

- 8. (original) The vertical cavity surface emitting laser of claim 7 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern in closest proximity to an emission facet.
- 9. (original) The vertical cavity surface emitting laser of claim 1 wherein said upper ohmic contact comprises an intracavity contact coupled to the optical cavity.
- 10. (original) The vertical cavity surface emitting laser of claim 9 wherein said emitting mirror comprises a dielectric DBR having a plurality of mirror periods.
- 11. (original) The vertical cavity surface emitting laser of claim 10 wherein optical thickness of mirror period containing said absorbing layer does not equal optical thickness of remaining mirror periods.
- 12. (original) The vertical cavity surface emitting laser of claim 11 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern in closest proximity to an emission facet.
- 13. (original) The vertical cavity surface emitting laser of claim 12 wherein said absorbing layer comprises a layer of conductive material.
- 14. (original) The vertical cavity surface emitting laser of claim 13 wherein said conductive material comprises titanium.
- 15. (original) The vertical cavity surface emitting laser of claim 1 wherein said emitting mirror comprises a hybrid mirror having a semiconductor portion and a dielectric portion.
- 16. (original) The vertical cavity surface emitting laser of claim 15 wherein said absorbing layer is integrated within said dielectric portion.



Serial No. 10/051,510

10/24/2003 11:53

- (original) The vertical cavity surface emitting laser of claim 16 wherein said absorbing 17. layer is formed at or near a standing wave null in optical intensity pattern that is closest to an emission facet.
- 18. (original) The vertical cavity surface emitting laser of claim 17 wherein said absorbing layer comprises a layer of conductive material.
- 19. (original) The vertical cavity surface emitting laser of claim 17 wherein said conductive material comprises titanium.
- 20. (original) A vertical cavity surface emitting laser, comprising: an optical cavity adjacent a first mirror; a semiconductor emitting mirror adjacent said optical cavity, and an absorbing layer integrated within the emitting mirror.
- 21. (original) The vertical cavity surface emitting laser of claim 20 wherein said absorbing layer comprises a layer of semiconductor material.
- 22. (original) The vertical cavity surface emitting laser of claim 21 wherein said semiconductor material is doped p-type.
- 23. (original) The vertical cavity surface emitting laser of claim 21 wherein the semiconductor material is a narrow bandgap material, and wherein an absorption edge of said semiconductor material is at a longer wavelength than emission wavelength of said vertical cavity surface emitting laser.
- 24. (original) The vertical cavity surface emitting laser of claim 20 wherein said absorbing layer is formed at or near a null in optical standing wave intensity pattern in closest proximity to an emission facet.
- 25. (Canceled.)

